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Determining the influx rate of meteoric material to the earth based on measurements with a patrol TV camera from a single station

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Abstract

We propose a technique for reducing the number of meteors observed at a single ground-based station to estimate the influx rate of meteoric material to the Earth (MAI-meteor activity index). We derive a formula that allows the meteor activity to be objectively estimated from the results of meteor detection by assuming that each meteor belongs to a stream with a uniform spatial particle distribution. As an example, we give meteor activity estimates obtained from the results of meteor detection by a patrol TV camera located at a single station. © 2007 Pleiades Publishing, Inc.

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